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A CASE OF PERIPHERAL PSEUDO-TABES WITH EXAGGERATED REFLEXES. AUTOPSY AND MICROSCOPICAL EXAMINATION SHOWING DEGENERATION OF THE PERIPHERAL NERVES AND NO LESIONS OF THE SPINAL CORD.*

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The term pseudo-tabes has been applied to a variety of spinal and neural affections with symptoms closely simulating those of true tabes spinalis—to forms of spinal meningitis, or meningo-myelitis chiefly affecting the dorsal aspects of the cord, or involving the dorsal roots; to neuritis or degeneration of the nerve trunks, or the nerve endings in skin or muscle. The symptoms in these cases of pseudo-tabes simulate closely or incompletely those of true tabes. The syndrome usually includes all, or a majority, of such symptoms as neuralgic or lightning pains, anesthesias, incoördination, bladder disturbances and lost knee-jerks, and if the sciatic distribution is affected, lost Achilles jerk. More or less marked atrophy may also be present. In a majority of cases the disease can be traced to some toxemia or infection, as to alcohol, arsenic, lead, diabetes, or syphilis. The clinical diagnosis between these different affections and true tabes is made by a close study of etiology, of previous history, and of the progress of the case, and is much helped by attention to a few symptoms which are usually absent in the one case and present in the other. The iritic reflexes, for instance, are not commonly affected in pseudo-tabetic cases, and in these cases also bladder symptoms may not play so important a rôle. The pains in the pseudo-tabetic are not always of the same character as those in true tabes. One symptom, lost knee-jerk, is commonly present in all types of cases, at least when the lower extremities and the parts of the nervous system related to them are affected. If it were not for this fact some of the cases would bear almost as strong a resemblance to ataxic paraplegia or combined sclerosis as to dorsal tabes. In a case observed by me in the Philadelphia Hospital, and of which a condensed report follows, the symptoms present were such as to incline me to regard the case either as one of ataxic paraplegia or of irregular or incomplete tabes (incomplete in the clinical sense), the term irregular tabes being used here to designate those cases in which the symptoms point to disease both of the dorsal and lateral columns, the lesions however predominating in the former. True tabetic phenomena such as shooting pains and ataxia were present, but the patient had also exaggerated knee-jerks and other phenomena which seemed to point to implication of the lateral columns, or at least of the pyramidal tracts. During the short time that the patient was under observation the case would most probably have been regarded by others, as it was by me, as one of irregular tabes or of the form of ataxic paraplegia in which tabetic phenomena predominate. I had the opportunity of making an autopsy in this case, and Dr. William G. Spiller has carefully examined microscopically the spinal cord, specimens of peripheral nerves, and of muscle, with the unexpected result of finding that the spinal roots at all levels and the cord at all levels, except some of the cell-bodies of the ventral horns, were free from disease, but marked degeneration was present in the most distal portions of the nerve trunks and in the small nerve bundles within the muscles examined. Some degenerative changes in the muscles were also present. Following is the report of the case:—

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J. M., 75 years old, was admitted to the Philadelphia Hospital in 1897, having had good health until twelve years before this time, when he began to have attacks of pain in the back which he attributed to cold, wet and over-exertion. Six years before admission to the hospital he began to show weakness in his right leg, which increased, the left also becoming affected. Two years later ataxia of station became prominent, and a year later he had to use a cane in walking, and at about the same time dull aching and at times shooting pains in the legs occurred. Later, but at a time not exactly recorded, he had trouble in holding his urine. Special notes of his condition were made in June, 1898. Tactile and pain senses were normal; temperature sense uncertain, especially at tops of feet and outsides of thighs. Station and gait showed incoördination. The upper as well as the lower extremities were markedly ataxic. The knee-jerks were plus; patellar clonus absent; ankle-clonus absent; biceps-jerk and jaw-jerk, plantar, cremasteric and abdominal reflexes present. The patient made no complaints of paresthesia of the feet or other parts. Additional examination and notes were made in May, 1899, which practically agreed with those above recorded except that the ataxia had become more marked in both legs and arms; the left pupil responded to light, accommodation and convergence; the right pupil did not react to light, and but poorly to accommodation and convergence. The following notes were made July 10, 1899. The patient is a rather poorly-nourished man of average height; his face is dull and stupid; tongue is coated and protrudes without tremor; eyes are half closed most of the time; extra-ocular movement fairly good. The left pupil reacts to light, in accommodation and convergence; the right pupil has little or no reaction. The musculature of the extremities is fairly well preserved, no wasting being detected; both legs and arms incline to a condition of spasticity. Station was markedly ataxic, the patient tending to fall unless supported; his gait also was ataxic. His arms were ataxic, with spastic rigidity. The grip was fairly good in both hands. Knee-jerks were plus; quadriceps-jerks present; patellar-clonus and ankle-clonus, cremasteric and plantar reflexes absent; biceps-jerks plus; Sinkler's toe-jerk present. The patient's mental condition precluded any satisfactory examination as to sensation, but tactile and pain senses seemed to be retarded in both legs. The patient died August 31, 1899, the physical signs and investigations made some time previous to death showing probable nephritis with cardiac degeneration, valvular disease and eventual pulmonary edema.

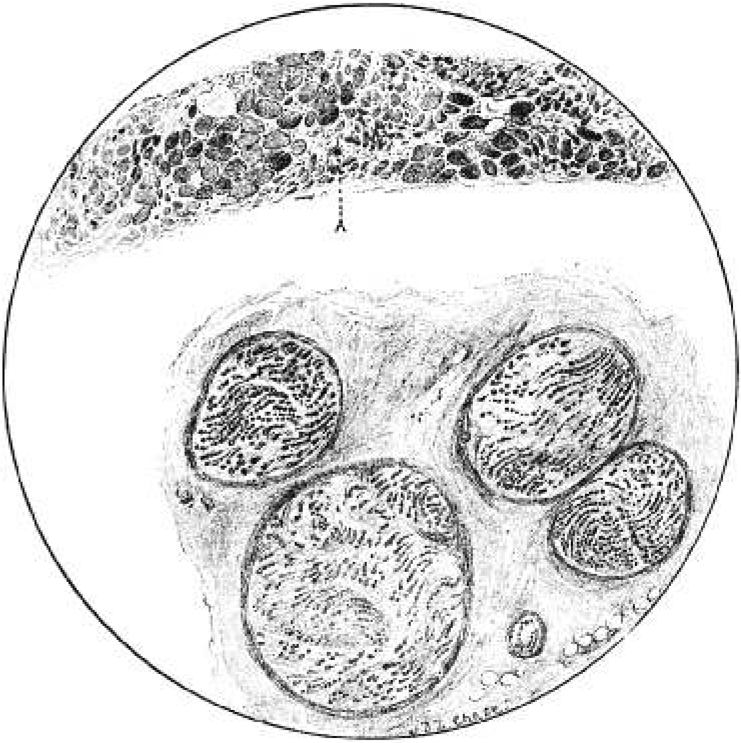

Fig. I. The upper drawing represents degenerated muscle from the sole of the left foot. A, group of degenerated muscular fibers. The lower drawing represents degenerated nerve fibers from the sole of the left foot.

Dr. Wm. G. Spiller reports as follows regarding his findings in the case: The spinal cord in the cervical, thoracic, and lumbar regions is almost normal. Some of the small vessels of the pia have walls of hyaline appearance when stained with carmine, and occasionally a slight round-cell infiltration about the vessels may be found within the spinal cord, but these are unimportant findings and do not explain the symptoms. The nerve cell-bodies of the anterior horns in the cervical and lumbar regions are not fully normal, as in some the chromophilic elements in the center of the cell-body have become granular, and in some the nuclei are displaced. Many of the cell-bodies are deeply pigmented, but the alteration of the nerve cell-bodies on the whole is not very intense. The ventral and dorsal roots everywhere are normal. Marchi preparations of sections from the lumbar region reveal nothing abnormal. Sections from the left sciatic nerve appear to be normal. The left internal plantar nerve is much degenerated, and muscle from the sole of the left foot contains many bundles of atrophied muscular fibers. The nerve bundles within the muscular tissue are also much degenerated. The case is one of degeneration of the peripheral ends of nerve fibers with some degeneration of the muscles.